



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,601	11/26/2001	Hideto Fujita	107314-00029	6606
4372	7590	05/12/2004	EXAMINER	
ARENT FOX KINTNER PLOTKIN & KAHN 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			BARTH, VINCENT P	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,601

Applicant(s)

FUJITA ET AL.

Examiner

Vincent P. Barth

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 26-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-37 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0204</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Comments

1. Claim 4 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiply dependent claim. See MPEP § 608.01(n). However, Claims 3 and 4 had been amended by Preliminary Amendment dated 26 November 2001 to remove such multiple dependency. Thus, the Examiner is of the opinion that the presentation of Claims 3 and 4 in the Amendment dated 19 February 2004 was an error in drafting, rather than an intentional amendment to the claims. In this connection, future amendments to the claims, if any, should properly identify the claims as “twice amended”, or the like. Accordingly, although such claims are generally not treated further on the merits pursuant to MPEP §608.01(n), Claim 4 has been discussed below as if it were in the form previously presented.
2. Applicants’ amendment to Claim 26 in response to the previous Office Action is acceptable, since the change clearly remedies a typographical error, and does not introduce new matter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz, U.S. Pat. No. 5,198,877 (30 Mar. 1993), in view of Chan, et al., U.S. Pat. No. 5,376,796 (27 Dec. 1994).

5. Referring to Claims 1-6, Schulz discloses a three-dimensional optical shape determining system, in which a measuring head 12 has a plurality of pilot light emitters (20, 22 and 24) which provide a means for a plurality of pilot light sensors (26, 28 and 30) to determine the location of the measuring head 12 in two coordinate systems (see Fig. 1). The first coordinate system corresponds to the position of the measuring head 12 with respect to the pilot light sensors, and the second reference coordinate system (identified as the "world coordinate system" in the instant Application) is a reference coordinate system 80 (see Fig. 1). Schulz further discloses a coordinate computer 24 which calculates the 3D spatial coordinates in relation to the coordinate reference frame 80 (col. 6, lns. 9-14). Schulz does not explicitly disclose a guide rail system, indeed, the preferred embodiment therein is a hand-held device. However, the system is certainly not limited to a hand-held system, and those of skill in the art would expect that the measuring head 12 could be mounted on a gantry, a boom, a stand, a guide rail, or any other

Art Unit: 2877

convenient holding and/or moving device in the event that such would be useful. In fact, one of the objectives of Schulz is to eliminate the need for, “[an] expensive, complicated, and high precision mechanical positioning apparatus” (col. 4, lns. 32-38). Therefore, Schulz suggests that such positioning elements are preferable, but that eliminating them saves costs and simplifies the device. Nevertheless, Chan discloses a body contouring system in which a camera or other sensing device may be rotated by a motorized means (i.e. a “driving” means, as is set forth in Claim 31) about a patient by means of a circular gantry 205 (see Figs. 2 and 3; col. 7, ln. 58 et seq.; col. 15, lns. 64-66), which keeps the camera at a relatively constant distance from the patient, if desired. Schulz and Chan are analogous art, since they are from a similar problem solving area, in that each involves determining surface contours. See Medtronic, Inc. v. Cardiac Pacemakers, 721 F.2d 1563, 1572-1573, 220 USPQ 97, 103-104 (Fed. Cir., 1983). The motivation for combining the references would have been to provide a means to position the measuring head by a mechanical means, as is suggested in Schulz. Accordingly, it would have been obvious to those skilled in the art to combine the references, at the time of the invention, in order to obtain such benefit.

6. Continuing now to refer to Claims 1-6, and particularly responding to the Remarks in the Amendment dated 19 February 2004, the Examiner respectfully disagrees with the two major arguments against the Schulz and Chan references. The first major argument relates to the first and second position detection means in Claim 1, and the second major argument relates to the combination of the gantry (i.e., guide rail) from the Chan reference. As to Applicants’ first argument, Applicants contrast the Schulz reference with instant Claim 1 by stating that, *inter alia*, “Schulz does not detect the position of the scanning head 12, twice, as does the position

Art Unit: 2877

detecting means recited in Claim 1.” (Remarks, pg. 15, lns. 2-4; emphasis in original). In support of such arguments, Applicants note that Claim 1 recites a first and second position detecting means (Remarks, pg. 14, lns. 14-18). Such distinction either incorrect, or requires further elaboration in a reply to the instant Office Action. As discussed above in the previous paragraph, the Schulz reference clearly detects a first coordinate system corresponding to the position of the measuring head 12 with respect to the pilot light sensors (i.e., a first time, by a first means), and a second reference coordinate system (identified as the “world coordinate system” in the instant Application), which is a reference coordinate system 80 (i.e., a second time, by a second means; see Fig. 1). Therefore, Schulz discloses two measurements, by two means, not a single measurement. As to Applicants’ second argument, the Examiner respectfully disagrees that the Schulz reference “teaches away” from the combination of a gantry or guide rail (Remarks, pg. 15, lns. 21-23). Applicant has argued that, “The gantry structure in Chan is the expensive ... apparatus that Schulz teaches away from.” (Remarks, pg. 15, lns. 21-23; emphasis added). Schulz does not “teach away” from the use of gantries or guide rails, but merely suggests that including such structures are expensive (see Schulz at col. 4, lns. 30-35). As such, Applicants’ argument appears to be “economic infeasibility” (see MPEP §2145(VII)), rather than “teaching away” pursuant to MPEP §2145(X)(D)(2), in which a reference suggests that a modification cannot be made. Schulz does not state that gantries and guide rails cannot be used, but merely that these mechanisms are expensive. Accordingly, the combination is not improper, since Schulz does not teach away from the combination with Chan, nor does economic infeasibility prevent the combination.

Art Unit: 2877

7. Referring to Claims 7 and 8, in which the object under observation is a foot, and in which the foot is examined in a particular order is a non-limiting statement of intended use, which does not distinguish the invention over the prior art. Claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. See MPEP§2114, citing *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). “[A]pparatus claims cover what a device *is*, not what a device *does*.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Applicants have not set forth any differences in the device relating to feet which would add new limitations thereto. In this connection, it would be an obvious design choice to modify the essentially circular gantry track disclosed in Chan into oblong or tapered shapes to accommodate any variety of objects to be measured. Accordingly, it would have been obvious to those skilled in the art at the time of the invention to modify the Chan disclosure to accommodate the shape of the object measured.

Allowable Subject Matter

8. Claims 26-37 are allowable, since the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations set forth therein.

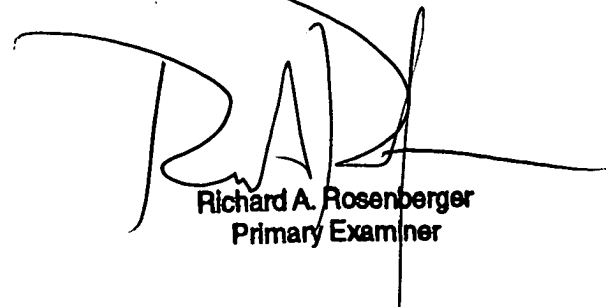
9. Referring to Claim 26, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a shape measuring device comprises a position measuring head, a position detecting means for detecting the position of the measuring head by a stereo method using two cameras, a mirror for reflecting the object to be measured disposed on a measuring stand, and an imaging means for imaging a measuring point on the

Art Unit: 2877

object and a virtual image of the object to be measured which is reflected in the mirror, in combination with the remaining limitations in the claim. Claims 27-34 are allowable based on their dependency upon the claim from which each is dependent. Referring to Claim 35, the prior art references, either considered alone or in combination, do not disclose or render obvious the limitations whereby a shape measuring device comprises a position measuring head, a position detecting means for detecting the position of the measuring head by a stereo method using two cameras, a mirror for reflecting the object to be measured disposed on a measuring stand, and an imaging means for imaging a measuring point on the object and a virtual image of the object to be measured which is reflected in the mirror, in combination with the remaining limitations in the claim. Claims 36 and 37 are allowable based on their dependency upon the claim from which each is dependent.

CONCLUSION

10. Applicants' Claims 1-8 are rejected based on the reasons set forth above.
11. Applicants' Claims 26-37 are allowable based on the reasons set forth above.
12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
13. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
14. Any inquiries concerning this communication from the Examiner should be directed to Vincent P. Barth, whose telephone number is 571-272-2410, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday. The fax number for the group after final actions is 703-872-9306.
15. If attempts to reach the Examiner prove unsuccessful, the Examiner's supervisor is Frank G. Font, who may be reached at 571-272-2415.
16. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.


Richard A. Rosenberger
Primary Examiner